AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-28. (Canceled).

29. (Currently Amended) An incandescence emitter for ~~incandescent~~ incandescence light sources, comprising an emitter body (F) ~~capable of being~~to be brought to incandescence at an operating temperature by means of passage of electric current, wherein on at least one surface of the emitter body (F) a micro-structure (R) is provided, operative to enhance absorbance for wavelengths belonging to the visible region of the spectrum, ~~characterized in that~~wherein

- said micro-structure (R) is at least partly made of a material (Au) whose melting temperature is lower than the operating temperature of the emitter body (F), and

- at least a substantial portion of the emitter body (F), including said micro-structure (R), is coated with an oxide with high melting point (OR), such as a refractory oxide,

said oxide being configured ~~operative~~ to preserve a profile of said microstructure (R) in case of melting ~~deformation or change of state~~ of the respective material (Au), consequent to the use of the emitter body (F) at an operating temperature exceeding the melting temperature of said material (Au).

30. (Currently Amended) An emitter as claimed in claim 29, ~~characterised in that~~wherein said oxide (OR) is ~~operative~~ arranged to preserve ~~a~~ the profile of said microstructure (R) also from effects of evaporation of the respective material (W; Au; W, Au) at ~~high~~ the operating temperature.

31. (Currently Amended) An emitter as claimed in claim 29, ~~characterised in that~~wherein the emitter body (F) is almost completely coated by said refractory oxide (OR)~~, in particular~~ with the exception of respective areas for connection to ~~terminals~~ electrodes (H) of the emitter.

32. (Currently Amended) An emitter as claimed in claim 29, ~~characterised in that~~wherein said micro-structure (R) is made of a conductor, semiconductor or composite

1353828

material (W; Au; W; Au)~~,~~ whose optical constants, combined with the shape of the micro-structure (R), are such as to allow a higher luminous emission efficiency than a classic incandescence filament, said efficiency being defined as the ratio between the fraction or visible radiation emitted at the operating temperature in the interval 380 nm - 780 nm and the fraction of radiation emitted at the same temperature in the interval 380 nm - 2300 nm.

33. (Currently Amended) An emitter as claimed in claim 29, ~~characterised in that~~wherein said material (Au) is selected among conductor, semiconductor and composite materials whose melting point is lower than the operating temperature of the filament (F).

34. (Currently Amended) An emitter as claimed in claim 29, ~~characterised in that~~wherein the emitter body (F) ~~it~~ is formed by at least a first layer of conductor material (W), melting at higher temperature than the operating temperature of the emitter body (F), such as tungsten, and by a second layer of material (Au) selected among conductor, semiconductor and composite materials whose melting point is lower than the operating temperature of the emitter body (F).

35. (Currently Amended) Emitter as claimed in claim 29, ~~characterised in that~~wherein said micro-structure (R) is at least partly formed with a material selected from among gold, silver and copper.

36. (Currently Amended) Emitter as claimed in claim 29, ~~characterised in that~~wherein said refractory oxide (OR) is selected from among ceramic base oxides, thorium, cerium, yttrium, aluminium or zirconium oxide.

37. (Currently Amended) An emitter as claimed in claim 29, ~~characterised in that~~wherein said micro-structure (R) is formed ~~obtained~~ by ~~means of~~ a superficial micro-structure of the emitter body (F), i.e., in the same material which constitutes the emitter body (F).

38. (Currently Amended) An emitter as claimed in claim 29, ~~characterised in that~~wherein said micro-structure comprises a diffraction grating (R), having at least one ~~between~~ of a plurality of micro-projections (R1, R2) and a plurality of micro-cavities (C), where the dimensions (h, D) of the pillar-like micro-projections (R1, R2) or ~~of~~ the micro-cavities (C) and the period (P) of the grating (R) are such ~~as~~ to

1353828

- enhance ~~the~~ emission of visible electromagnetic radiation from the material (W; Au; W, Au) constituting at least the micro-structure (R), and/or

- reduce ~~the~~ emission of infrared electromagnetic radiation from the material (W; Au; W, Au) constituting at least the micro-structure (R), and/or

- enhance ~~the~~ emission of the infrared electromagnetic radiation from the material (W; Au; W, Au) constituting at least the micro-structure to a lesser extent with respect to the increase in visible emissivity.

39. (Currently Amended) An emitter as claimed in claim 38, ~~characterised in that~~wherein said grating (R) is obtained with

- a first conductor material (W) melting at higher temperature than the operating temperature of the emitter body (F), the first material having a structured part,

- a coating layer (Au) which covers at least the structured part of said first material (W), the coating layer being of a second material (Au) selected among conductor, semiconductor or composite materials melting at lower temperature than the operating temperature of the emitter body (F),

where the coating layer (Au) ~~is sufficiently thin to copy~~copies the profile of the structured part of the first material (W), to form therewith said grating (R), and the second material (Au) has a greater emission efficiency than the first material (W), said efficiency being defined as the ratio between the fraction of visible radiation emitted at the operating temperature in the interval 380 nm - 780 nm and the fraction of radiation emitted at the same temperature in the interval 780 nm - 2300 nm.

40. (Currently Amended) An emitter as claimed in claim 38, ~~characterised in that~~wherein

- said grating (R) is obtained on the surface of a layer (Au) of a first conductor, semiconductor or composite material whose melting point is lower than the operating temperature of the filament (F),

- said layer (Au) is placed on a second conductor material (W) whose melting point is higher than the operating temperature of the emitter body (F),

where the first material (Au) has higher emission efficiency than the second material (W), said efficiency being defined as the ratio between the fraction of visible radiation emitted at the operating temperature in the interval 380 nm – 780 nm and the fraction of radiation emitted at the same temperature in the interval 380 nm – 2300 nm.

41. (Currently Amended) An emitter as claimed in claim 38, ~~characterised in that~~wherein said grating (R) is obtained with

- a first layer of refractory oxide (OR) having a ~~structure~~ structured part,

- a coating layer (Au) which covers at least the structured part of the first layer of refractory oxide (OR), the coating layer being of a material (Au) selected among conductor, semiconductor or composite materials melting at lower temperature than the operating temperature of the emitter body (F),

where the coating layer (Au) ~~is sufficiently thin to copy~~ copies the profile of the structured part of the first ~~material (W)~~layer of refractory oxide (OR), to form therewith said grating (R), and where the coating layer (Au) is in turn coated by an encapsulating layer constituted by refractory oxide (OR).

42. (Currently Amended) An emitter as claimed in claim ~~31~~29, ~~characterised in that~~wherein at least a throat or cavity (G) is provided, open on the material constituting the emitter body (F) and defined in ~~at least one among said electrodes (H) and~~ said refractory oxide (OR), the cavity or cavities (F) ~~provided being operative to receive~~ receiving part of said material as a result of volume expansions thereof~~and/or to avoid delamination phenomena between said refractory oxide (OR) and said material and/or ruptures of the complex constituted by said material, said refractory oxide (OR) and said electrodes (H)~~.

43. (Currently Amended) An emitter as claimed in claim 38, ~~characterised in that~~wherein the periodicity of the micro-projections (R1, R2) or of the micro-cavities (C) is of the order of the wavelength of visible radiation.

44. (Currently Amended) An emitter as claimed in claim 38, ~~characterised in that~~wherein the periodicity of the micro-projections (R1, R2) or of the micro-cavities (C) is between 0.2 and 1 micron.

45. (Currently Amended) An emitter as claimed in claim 38, ~~characterised in that~~wherein the height or depth of the micro-projections (R1, R2) or of the micro-cavities (C) is between 0.2 and 1 micron.

46. (Currently Amended) An emitter as claimed in claim 29, ~~characterised in that~~wherein said micro-structure (R) is binary, i.e. with two levels.

47. (Currently Amended) An emitter as claimed in claim 29, ~~characterised in that~~wherein said micro-structure (R) is multi-level, i.e. it has a projection with more than two levels.

48. (Currently Amended) An emitter as claimed in claim 29, ~~characterised in that~~wherein said micro-structure (R) has a continuous projection.

49. (Currently Amended) An emitter as claimed in claim 29, ~~characterised in that~~wherein it operates at a lower temperature than the melting point of the refractory oxide (OR).

50. (Currently Amended) An emitter as claimed in claim 29, ~~characterised in that~~wherein it is configured as a filament or planar plate structured under the wavelength of visible light, and in that said micro-structure (R) is a two-dimensional grating of absorbing material (k>1).

51. (Currently Amended) A method for constructing an incandescence light emitter ~~capable of being~~ to be brought to incandescence by ~~the~~ passage of electric current, comprising the steps of:

a) constructing a template of porous alumina,

b) infiltrating the template of porous alumina with a material destined to constitute ~~the~~ an incandescence emitter body (F), in such a way that the alumina structure serves as a mould for at least part of an anti-reflection micro-structure (R) of the incandescence emitter body (F), said material (Au) having a melting temperature lower than the operating temperature at which the incandescence emitter body (F) is meant to be used,

c) depositing a refractory oxide (CR) onto the remaining part of the incandescence emitter body (F) destined to extend between two respective ~~terminals~~ electrodes (H), said oxide

being operative to preserve a profile of said microstructure (R) in case of melting~~deformation or change of state~~ of the respective material (Au), consequent to the use of the incandescence emitter body (F) at an operating temperature exceeding the melting temperature of said material (Au),

wherein the template of porous alumina is maintained or else eliminated prior to step c).

52. (Previously Presented) A method as claimed in claim 51, where the step a) comprises the deposition of an aluminium film, with thickness in the order of one micron, on a suitable substrate and the subsequent anodisation thereof, said anodisation comprising at least:

- a first phase of anodisation of the alumina film;

- a phase of reducing the irregular alumina film obtained as a result of the first anodisation phase;

- a second phase of anodisation of the alumina film starting from the residual part of irregular alumina not eliminated by said reduction phase.

53. (Currently Amended) A method for constructing an incandescence emitter capable of being brought to incandescence by ~~the~~ passage of electric current, comprising the steps of:

- obtaining a filiform or laminar body ~~element~~ of the material whereof the emitter is to be made (F), said material (Au) having a melting temperature lower than the operating temperature at which the emitter (F) is meant to be used;

- etching said ~~element~~ body to form an anti-reflection micro-structure (R),

and coating the ~~emitter~~ body (F) in which the anti-reflection micro-structure (R) has been formed with a refractory oxide (OR), said oxide being operative to preserve a profile of said microstructure (R) in case of ~~deformation or change of state~~ melting of the ~~respective~~ material (Au) thereof, consequent to the use of the emitter (F) at an operating temperature exceeding the melting temperature of said material (Au).

54. (Currently Amended) An incandescent light source, comprising ~~a~~ an incandescence light emitter body ~~capable of being~~ brought to incandescence by the passage of electric current, ~~characterised in that~~wherein said incandescence light emitter (F) is as claimed in claim 29.

1353828

55-56. (Cancelled).

57. (New) An emitter as claimed in claim 29, wherein said micro-structure comprises a diffraction grating (R) consisting of a plurality of pillar-like micro-projections (R1, R2).

58. (New) An emitter as claimed in claim 29, wherein at least a throat or cavity (G) is provided, open on the material constituting the emitter body (F) and defined in at least one of said electrodes (H), the cavity or cavities (F) receiving part of said material as a result of volume expansions thereof.